APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

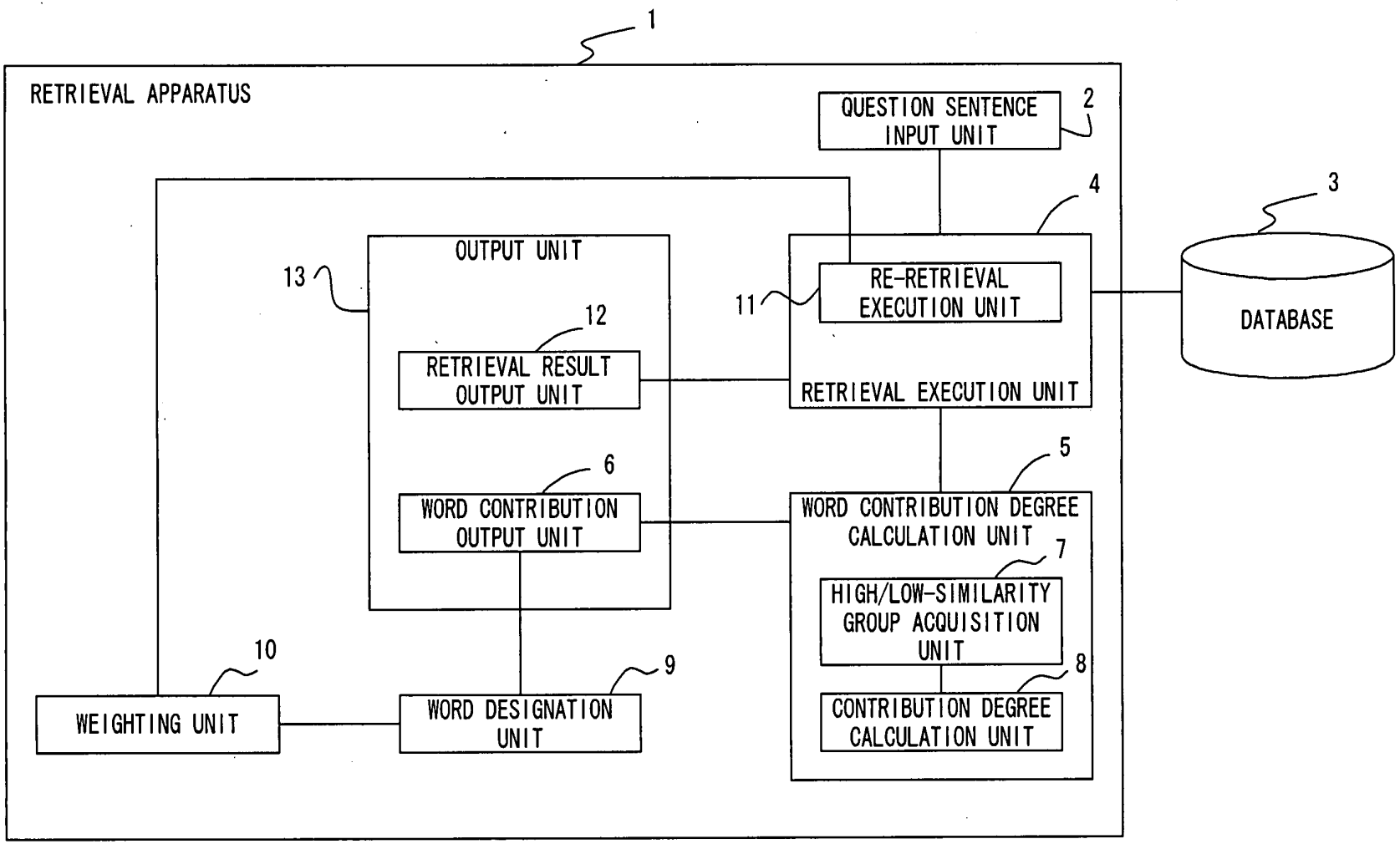


FIG. 1

APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

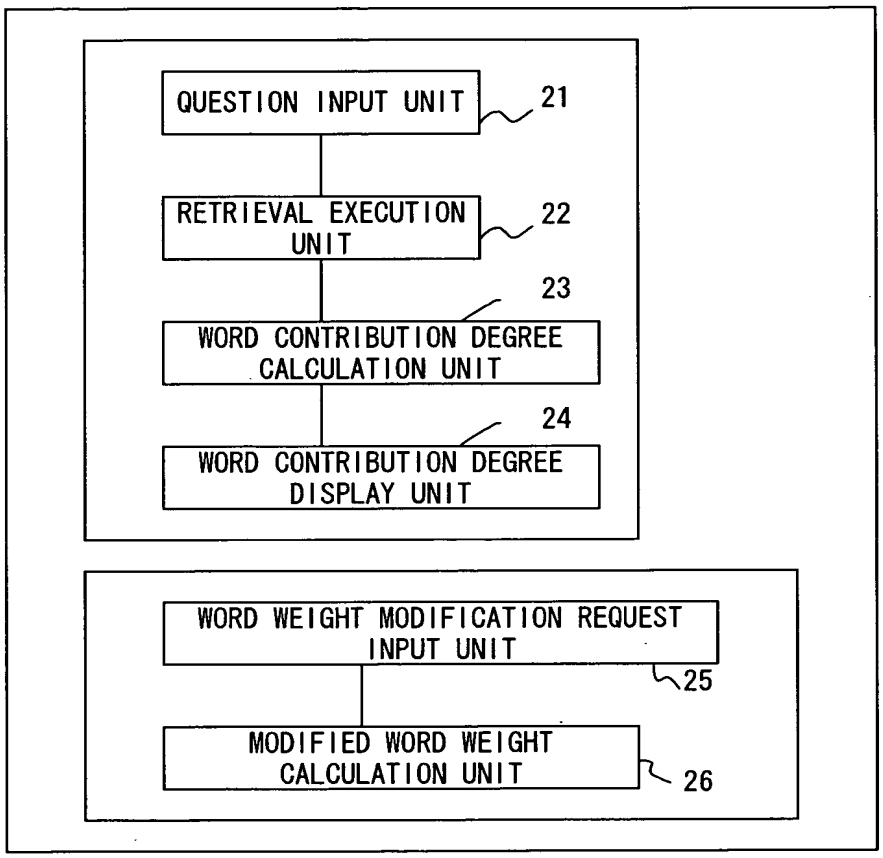


FIG. 2

APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

F0606F 05/06/06

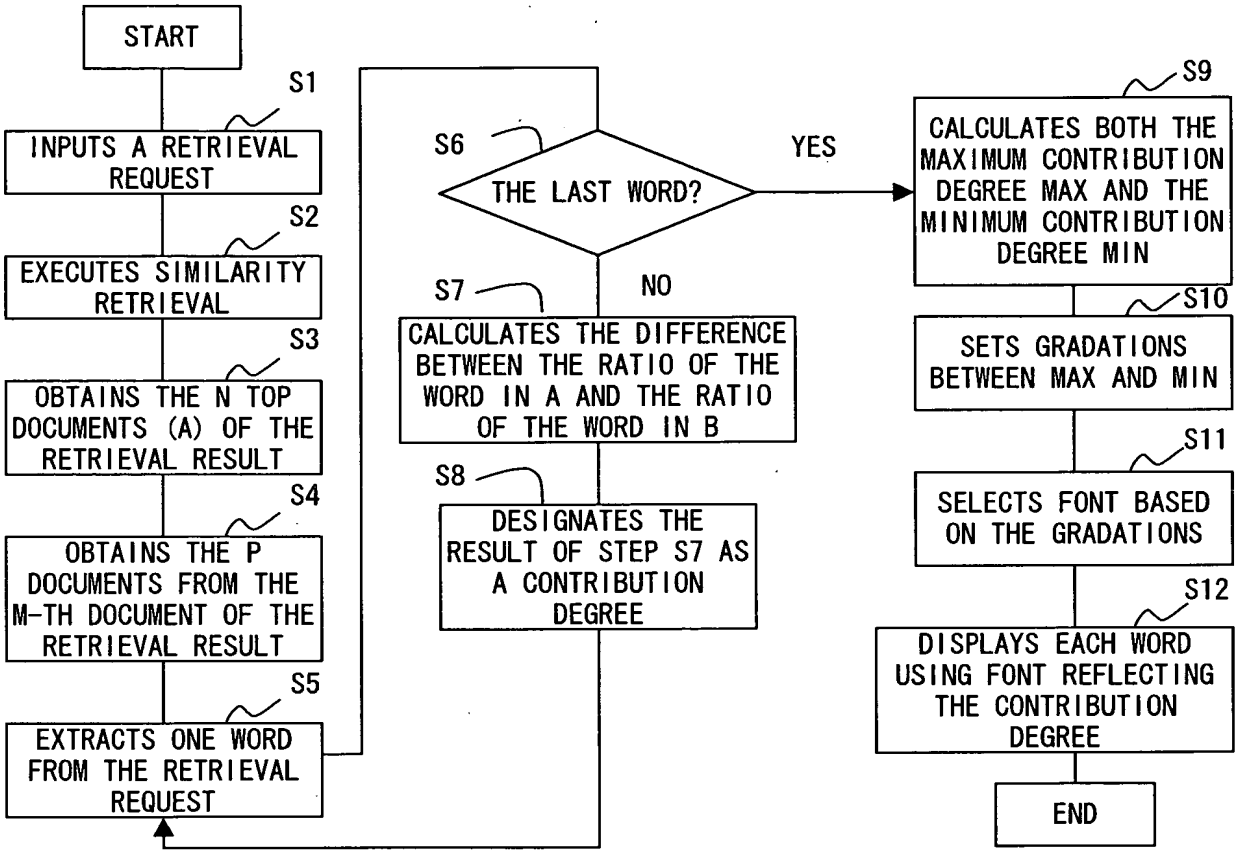


FIG. 3

APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

F05050F-050450

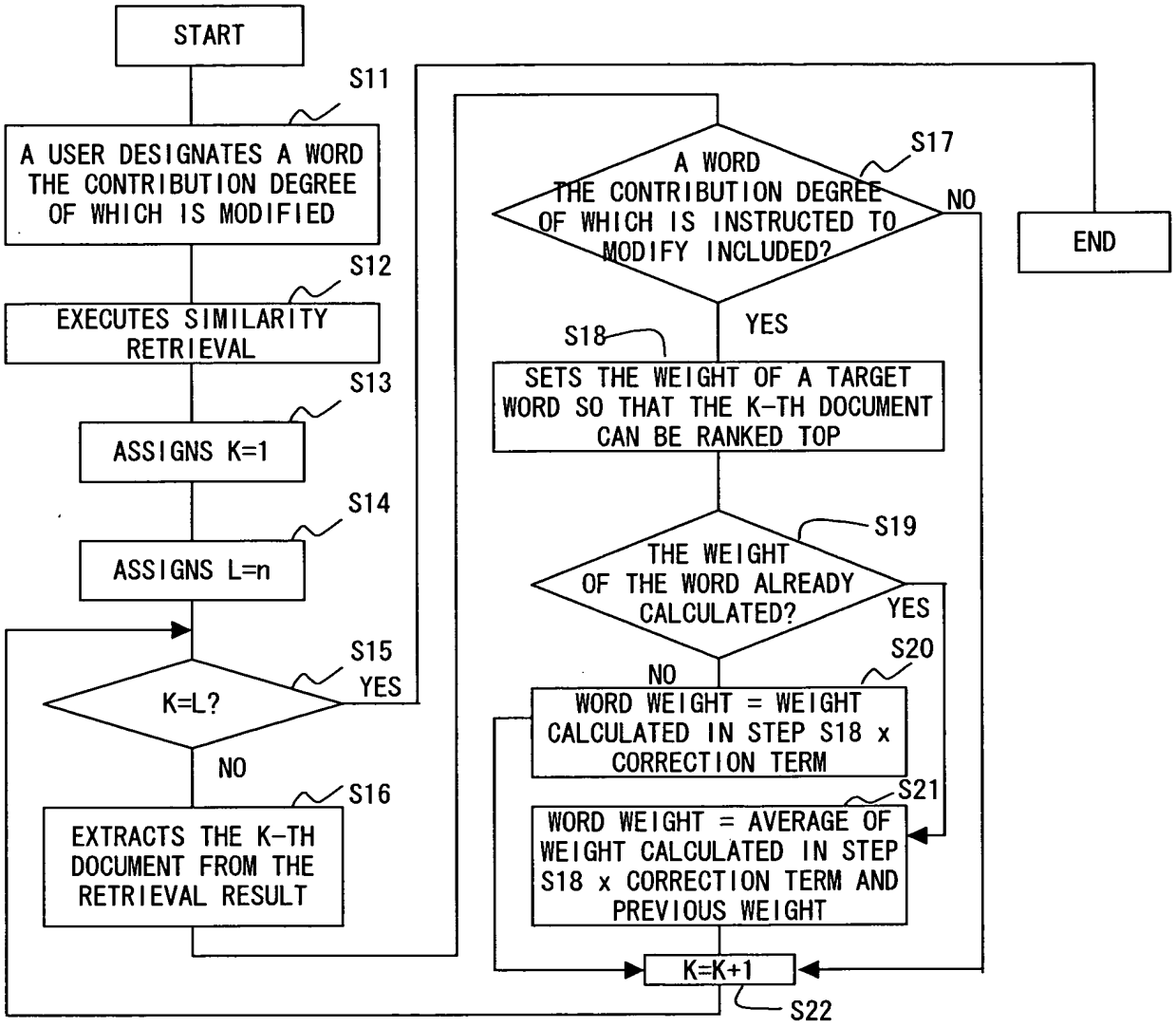


FIG. 4

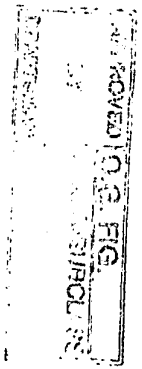
APPROVED O.G. FIG.
BY
DRAFTSMAN

EP 0 837 403 A2

- PURPOSE
  - SEARCHES FOR A WORD hybrid car
- QUESTION SENTENCE
  - INPUTS IN A NATURAL LANGUAGE(REQUEST FORMAT TO A SEARCHER)
  - TAKE TREC Query NO. 385 AS AN EXAMPLE
  - Identify documents that discuss the current status of hybrid automobile engines, (i.e., cars fueled by something other than gasoline only.) A relevant document may include research on non-gasoline powered engines or prototypes that may be fueled by natural gas, methanol, alcohol; cost to the consumer, health benefits derived; and shortcomings in horsepower and passenger comfort.

FIG. 5

JP06007656T2660



- A = TOP 10 DOCUMENTS
- B = 200 DOCUMENTS FROM THE TOP 800 DOCUMENTS
- CALCULATION EXPRESSION
- CONTRIBUTION DEGREE CALCULATION EXPRESSION(Term Selection Value(Bougham formula))

Tsv = (r/R - alpha* s/S) * w
alpha = parameter
w = r/(R-r)/ (n-r)/(N-n-R+r)
r = NUMBER OF DOCUMENTS, INCLUDING A TARGET WORD, OF A
R = A
n = NUMBER OF DOCUMENTS, INCLUDING A TARGET WORD
S = B
s = NUMBER OF DOCUMENTS, INCLUDING A TARGET WORD, OF B
N = NUMBER OF ALL DOCUMENTS

FIG. 6

APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

TO6807: 050704.660

- fuel 7.2
- methanol 6.8
- cars 6.1
- gas 5.4
- automobile 5.1
- gasoline 4.8
- natural 4.5
- powered 3.7
- alcohol 2.4
- engines 2.2
- consumer 2.1
- passenger 2.0
- prototypes 1.6
- research 1.0
- benefits 1.0
- derived 0.9
- health 0.7
- hybrid 0.6

FIG. 7

APPROVED O.G. FIG.
BY CLASS SUBCLASS
DRAFTSMAN

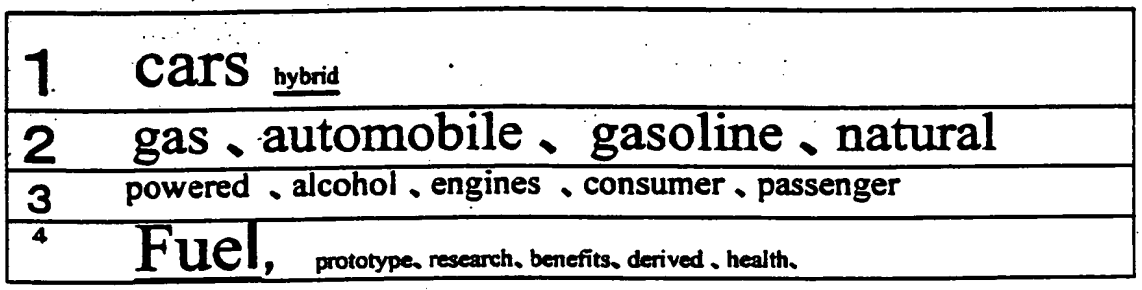
FOSSIL, 6,554,450

1	Fuel、methanol 、cars
2	gas 、automobile 、 gasoline 、natural
3	powered 、alcohol 、engines 、consumer 、passenger
4	prototype、research、benefits、derived 、health、hybrid

FIG. 8

APPROVED O.G. FIG.
CLASS SUBCLASS

EP 0 697 656 A2



MAXIMIZES THE CONTRIBUTION DEGREE OF A WORD hybrid

DROPS THE CONTRIBUTION DEGREE OF A WORD fuel

DELETES A WORD methanal

FIG. 9

APPROVED | O.G. FIG.
BY | CLASS | SUBCLASS
DRAFTSMAN

	Cars	hybrid	gas	automobile	gasoline	natural	powered	alcohol	fuel
1	5	0	1	1	3	1	2	1	5
2	4	0	1	0	3	1	2	1	5
3	3	0	0	0	2	1	1	0	3
:									
8	2	1	2	1	1	0	2	1	1
9									
10									
:									
:									
20									
:									
:									
:									
1000									

FIG. 10

Patent Application Publication

	Cars	hybrid	gas	automobile	gasoline	natural	powered	alcohol	fuel
1	5	0	1	1	3	1	2	1	5
2	4	0	1	1	3	1	2	1	5
3	3	0	0	0	2	1	1	0	3
.									
.									
8	2	1	2	1	1	0	2	1	1
9									

- CALCULATION FOR RANKING UP A DOCUMENT, INCLUDING A WORD Hybrid
  - THE SCORES OF THE TOP AND EIGHTH DOCUMENTS ARE 19 AND 11, RESPECTIVELY
  - TO RANK UP THE EIGHTH DOCUMENT TO THE TOP, MULTIPLY THE WORD Hybrid BY 9
  - WEIGHT OF THE WORD Hybrid 3 = 9 x 1/log(8)

- CALCULATION FOR RANKING DOWN A DOCUMENT, INCLUDING A WORD fuel
  - THE SCORES OF THE TOP AND EIGHTH DOCUMENTS ARE 19 AND 11, RESPECTIVELY
  - TO BRING THE TOP DOCUMENT CLOSE TO THE EIGHT, SET THE WORD fuel TO 1(THE MINIMUM)
  - WEIGHT OF THE WORD fuel 1/5 = 1/5 x 1/log (1)

FIG. 11

FIG.
CLASS/SUBCLASS

Express Mail No. EL 657 427 650

hybrid	5.3
cars	5.1
gas	4.8
automobile	4.6
gasoline	4.2
natural	4.1
fuel	4.1
powered	3.7
prototypes	3.4
alcohol	2.1
engines	1.3
consumer	1.1
passenger	1.0
research	0.9
benefits	0.5
derived	0.3
health	0.2

FIG. 12

APPROVED | O.G. FIG.
CLASS | SUBCLASS

FOSTER-GRAHAM

• 1 hybrid ,cars ,gas , automobile
• 2 gasoline ,natural ,fuel ,powered,prototypes
• 3 alcohol engines consumer passenger
• 4 research , benefits, derived, health

FIG. 13

APPROVED O.G. FIG.
CLASS SUBCLASS

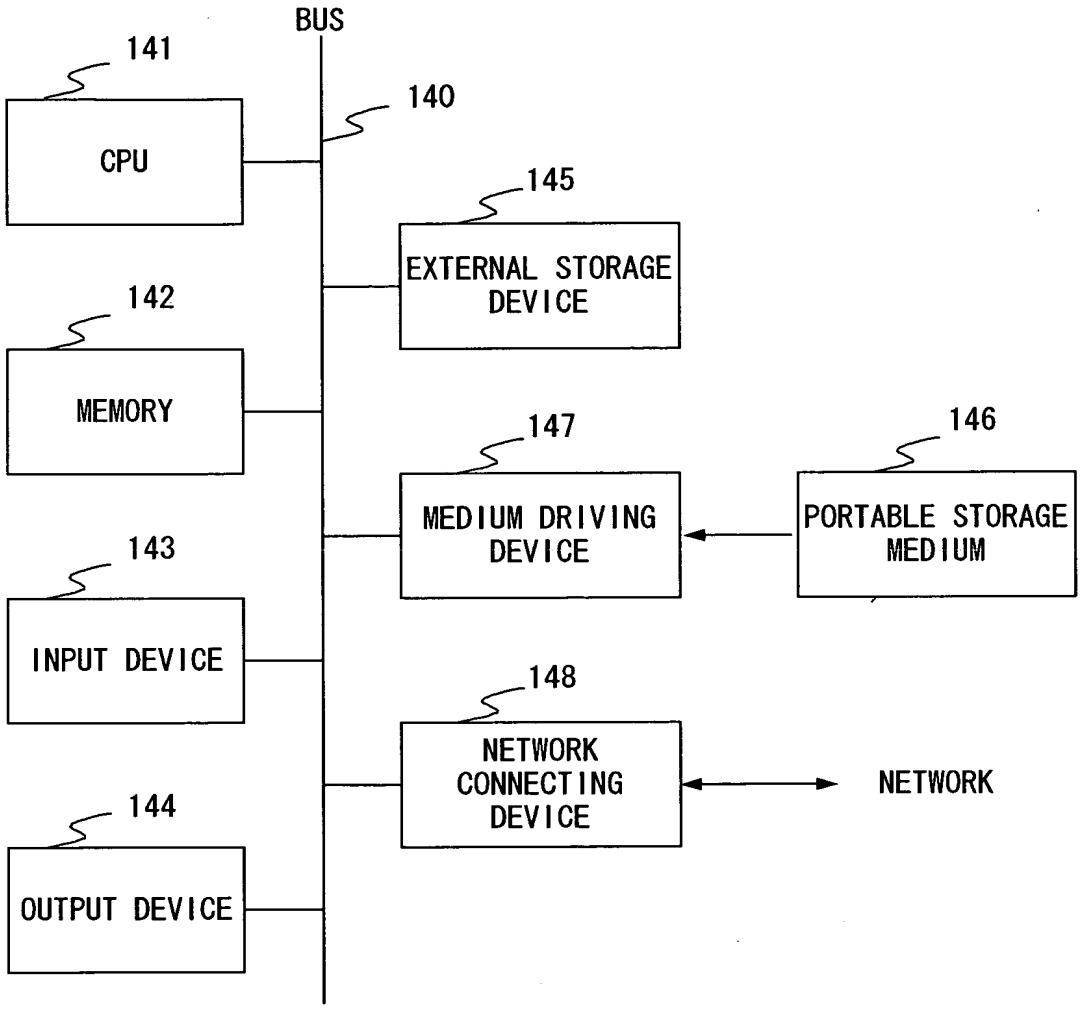


FIG. 14

APPROVED O.G. FIG.
CLASS SUBCLASS

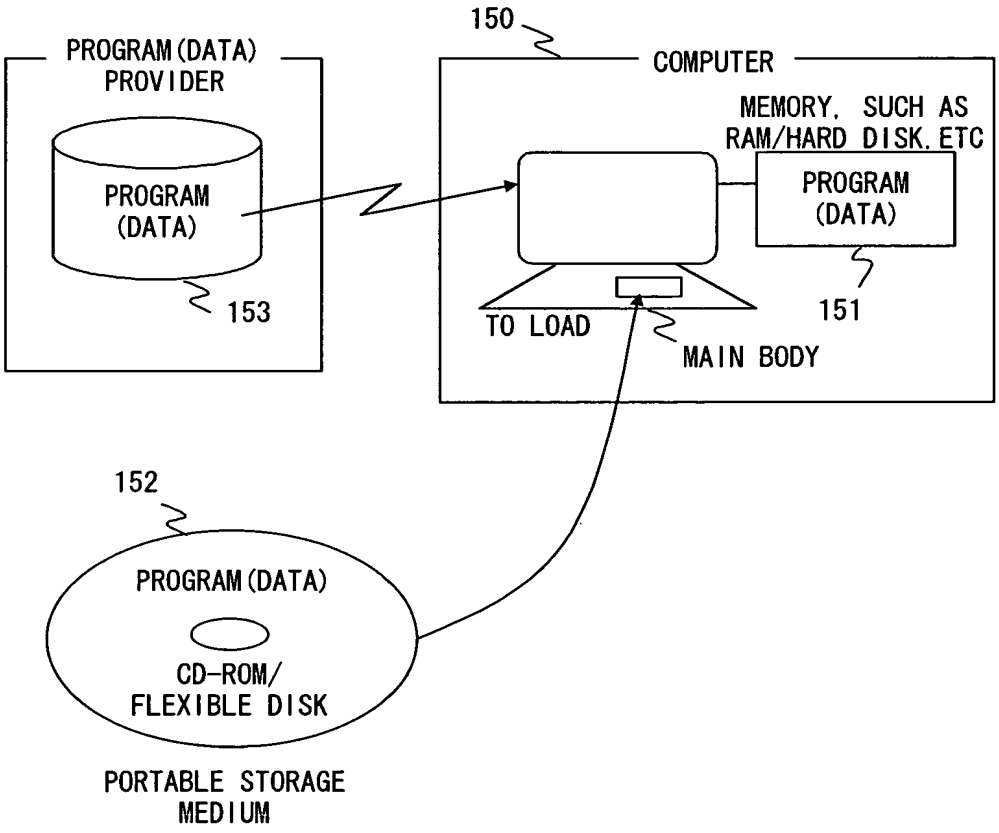


FIG. 15